



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/681,682	05/21/2001	Edgar N. Rudisill	SS3161USNA	4206

23906 7590 08/14/2002

E I DU PONT DE NEMOURS AND COMPANY  
LEGAL PATENT RECORDS CENTER  
BARLEY MILL PLAZA 25/1128  
4417 LANCASTER PIKE  
WILMINGTON, DE 19805

EXAMINER	
MUSSER, BARBARA J	
ART UNIT	PAPER NUMBER

1733

DATE MAILED: 08/14/2002

/0

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/681,682

Applicant(s)

RUDISILL ET AL.

Examiner

Barbara J. Musser

Art Unit

1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 May 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 7,9.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear what range of width/height ratios constitute a planar stream. Additionally, from reading the specification, it is unclear whether the polymer is considered a planar flow stream while it is in the distribution manifold as each manifold arranges the polymer into a thin plane of polymer. (Specification, [0020]) The specification discloses that one distribution manifold forms one planar flow stream. [0027]) The figures also seem to show that the filter is directly at the bottom of the distribution manifold and not after the flow has been separated into streams. (Figure 1) It is unclear whether one distribution manifold is intended to form multiple "planar" flow streams or has a single planar one within itself.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hills(U.S. Patent 5,162,074) in view of Groten et al.(U.S. Patent 6,402,870) and Buehning(U.S. Patent 4,889,476).

Hills discloses forming multi-layered filaments by extruding multiple polymers into separate molten streams, filtering the streams, distributing streams into multiple coat hanger distribution manifolds which for the streams into planar flow streams, and feeding the streams into multiple spinnerets wherein the polymers are joined together within the spinneret.(Figures 1, 3, and 4) The reference does not disclose joining the polymers together outside the spinnerets. Groten et al. discloses that it is not possible with current technology to achieve complex cross-sections of polymers with clear outlines using coextrusion and that instead the polymers should be joined outside the spinneret.(Col. 1, ll. 53-57; Figure 10) It would have been obvious to one of ordinary skill in the art at the time the invention was made to join the polymers of Hills together outside the die so that the complex shape of the polymer filament formed would have a clear outline.(Col. 1, ll. 53-57)

Hills also does not disclose filtering the polymer after it passes through the coat hanger manifolds. Buehning discloses filtering after passing through a coat hanger manifold since the filter sheers the polymer reducing the viscosity.(Col. 5, ll. 33-37) It would have been obvious to one of ordinary skill in the art at the time the invention was made to place the filter after the coat hanger manifold since this would allow the filter to sheer the polymer reducing the viscosity(Col. 5, ll. 33-37) and since placing the filter elsewhere in the apparatus is an obvious alternative to filtering at the beginning.

Art Unit: 1733

Although the reference does not specifically disclose extruders, one in the art would appreciate that molten polymer is produced by an extruder.

Regarding claims 2 and 6, although Hills does not specifically disclose the use of air to attenuate the formed polymer fibers, the use of such air is well-known and conventional in the fiber forming arts, as shown for example by Buehning(Figure 2) It would have been obvious to one of ordinary skill in the art at the time the invention was made to use air to attenuate the fibers of Hills, Groten et al., and Buehning since it is well-known and conventional to do so and since Buehning discloses that using air to attenuate the fibers draws them down to a significantly smaller diameter.(Col. 1 ll. 45-49)

Regarding claims 3 and 8, Hills is directed to using two polymers.

Regarding claims 4 and 9, while the references as directed to using two polymers, one in the art would appreciate that the same process could be used to form polymer fibers with three different polymers. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Hills, Groten et al, and Buehning to use three polymers as the extrusion of three polymer fibers is well-known and conventional in the fiber forming art.

Regarding claims 7 and 10, Hills discloses coat hanger distribution manifolds.(Figure 4)

### ***Response to Arguments***

5. Applicant's arguments with respect to claims 1-10 have been considered but are moot in view of the new ground(s) of rejection.


Art Unit: 1733


***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Barbara J. Musser** whose telephone number is **(703)-305-1352**. The examiner can normally be reached on Monday-Thursday; alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Ball can be reached on 703-308-2058. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

  
BJM  
August 12, 2002

  
Michael W. Ball  
Supervisory Patent Examiner  
Technology Center 1700